

Abstract

Acoustic Wave Transducer With Transverse Mode Suppression

5 The invention relates to a transducer that works with surface acoustic waves in which
interfering transversal modes are suppressed. This is accomplished by mutually adapting
to one another the transversal excitation profile of the acoustic wave and the transversal
basic mode of the waveguide formed by the acoustic spur and adjacent exterior areas.
This adaptation is accomplished by dividing the acoustic spur into an excitation area and
10 marginal areas, whereby the width of a marginal area is approximately one-quarter
wavelength of the transversal basic mode, and whereby the wave number of the
transversal basic mode in the excitation area is zero. In one advantageous further
development of the invention, an excitation strength that is a function of the transversal
coordinate can be attained that is optimally adapted to the basic mode by dividing the
15 excitation area in the transversal direction into partial spurs that are wired to one another
serially and/or in parallel.

Figure 1